APPENDIX A

Revised Statement of Work for Remedial Investigation/Feasibility Study

Libby Asbestos Site, Operable Unit 3

December 22, 2015

1.0 INTRODUCTION

The purpose of the remedial investigation/feasibility study (RI/FS) for Operable Unit 3 (OU3) of the Libby Asbestos Site (the Site) is to investigate the nature and extent of contamination within the OU3 boundaries and to develop and evaluate potential remedial alternatives for OU3.

The Environmental Protection Agency (EPA) established preliminary study area boundaries for the purpose of planning and developing the initial scope of the RI/FS for OU3. The preliminary boundaries include the former vermiculite mine and the surrounding geographic area that may have been impacted by current and/or historical releases from the mine. EPA will determine the final OU3 boundaries based on the information generated during the RI/FS.

2.0 PURPOSE OF THE STATEMENT OF WORK

EPA and the Respondents initially entered into an Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study for OU3 in 2007 (2007 Administrative Order or AOC). The 2007 Administrative Order includes a statement of work (SOW) for the RI/FS as Appendix A to the AOC. Based on paragraphs 45(a), (c), and (d) of the 2007 AOC, EPA and the Respondents have modified the SOW (revised SOW), for which the new, revised terms are effective from and after the date that this revised SOW is transmitted by EPA and the Respondent confirms willingness to perform the additional work in writing to EPA.

This revised SOW sets forth requirements for conducting an RI/FS at OU3. The Respondents shall conduct the RI/FS in accordance with this revised SOW and the requirements in the 2007 Administrative Order, and consistent with the National Contingency Plan (NCP) (40 CFR Part 300) and "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA" (OSWER Directive No. 9355.3-01, Oct. 1988) and any other guidance documents that EPA identifies as relevant to any aspect of conducting an RI/FS for OU3. A list of the primary guidance documents is included as Attachment A to this revised SOW.

As specified in CERCLA Section 104(a)(1), as amended by SARA, EPA will oversee the Respondents' activities throughout the RI/FS. The Respondents shall support EPA's initiation and conduct of oversight activities. EPA's determinations, approvals, and activities as provided for in

the 2007 Administrative Order, the revised SOW, CERCLA, the NCP, and applicable guidance will be conducted in consultation with the State of Montana (State), specifically, the Montana Department of Environmental Quality (DEQ) and Montana Department of Natural Resources and Conservation (DNRC), and the U.S. Forest Service (USFS), which manages and protects certain areas located within OU3. Respondents shall provide copies of all deliverables, and any other documents required to be submitted to EPA under the terms of this revised SOW, to the State and USFS simultaneously with submitting them to EPA. EPA is responsible for making final approvals, disapprovals, or requests for modification of all deliverables submitted pursuant to this revised SOW. To the extent that the work would occur on areas of the mine subject to State permits or for the Dam and Slope Stability Engineering work, such work is subject to State approval. EPA will review the work plan to ensure the activities are consistent with CERCLA, the NCP, and the overall protectiveness of proposed site remedies under the RI/FS.

Performance of the Work described in this revised SOW by the Respondents and EPA's review and approval of documents and activities described in this revised SOW must be performed in accordance with the procedures described in the 2007 Administrative Order. The Respondents shall furnish all necessary personnel, materials, and services needed or incidental to, performing the Work described in this revised SOW, except as otherwise specified in the 2007 Administrative Order. In order to ensure the meaningful progression of the RI/FS and to limit the number of revisions of deliverables, EPA may issue a written determination that a final document must be issued and provide direction on the content of the final deliverable and schedule for submission as part of the RI/FS.

3.0 INITIAL PLANNING FOR THE REMEDIAL INVESTIGATION

3.1 Assemble Existing Information

The Respondents shall assemble existing information relevant to the RI/FS for OU3 including, but not limited to:

- All documentation and reporting of historical operations activities and studies concerning the former vermiculite mine and contaminants associated therewith;
- All mine reclamation plans and reports;
- All environmental sampling and analysis plans;
- All environmental and other data, maps and photos; and
- All reports describing data summaries, data evaluations; or interpretations of data.

This must include available data relating to the types and quantities of hazardous substances, pollutants, or contaminants within OU3 and past material management and disposal practices at the former vermiculite mine.

The Respondents shall provide the information to EPA, with copies to the State and USFS, in accordance with the schedule contained in Section 10 of this revised SOW.

3.2 **Conduct Field Visit**

The Respondents shall conduct a field visit of OU3 during the project scoping phase to assist in developing a conceptual understanding of sources and areas of contamination as well as potential exposure pathways and receptors at OU3. The Respondents shall invite EPA and DEQ to participate in the field visit and shall provide notice at least two weeks of the proposed date. EPA may invite other interested agencies to participate in the field visit.

3.3 **Project Scoping Summary**

Based on review of the existing information and the field visit, EPA will develop preliminary problem statements, conceptual site models of potential exposure pathways and potential human health and ecological receptors, preliminary remedial action objectives, and a preliminary list of potential State and federal applicable or relevant and appropriate requirements (ARARs) in a project scoping summary document.

4.0 COMMUNITY RELATIONS

EPA will develop and implement community relations activities for OU3. The Respondents shall, as requested by EPA, assist EPA by providing information regarding the Site and/or OU3 history, participating in public meetings, developing graphics, placing newspaper advertisements developed by EPA, or distributing fact sheets developed by EPA. All Respondents-conducted community relations activities will be subject to oversight by EPA.

5.0 SITE CHARACTERIZATION

The overall objective of site characterization is to describe the nature and extent of contamination within OU3 and to describe areas of OU3 that may pose a threat to human health or the environment. The Respondents shall perform the activities as set forth in a Sampling and Analysis Plan (SAP) and described in this section including:

- Implement EPA-approved SAPs;
- Document field activities;
- Work with EPA's contractor to arrange for the laboratory analysis of samples at laboratories specified by EPA and in accordance with the EPA-approved SAPs;
- EPA's contractor will deliver laboratory data to EPA in the format specified in the SAPs;
- Prepare annual field sampling summary reports; and

- Prepare a draft and final RI report.

The Respondents shall identify data needed to conduct the RI/FS, including data gaps identified prior to or during the FS in order to complete the FS report. EPA may also identify data gaps that must be addressed by the Respondents. In addition to the data needed to conduct the RI/FS, the Respondents shall also identify data gaps to meet the requirements of the Dam and Slope Stability Engineering work.

Prior to starting the development of the FS, both EPA and the Respondents shall identify potential data gaps for the remaining work. EPA will consider data gaps for the FS and the Respondents shall consider data gaps for both the FS and Dam and Slope Stability Engineering work. EPA and the Respondents shall then work together to determine which data are needed for the FS and for Dam and Slope Stability Engineering work and shall develop a schedule for collecting these data. The Respondents shall maintain a master list of data gaps that need to be filled and the schedule for the collection of these data. If data gaps identified as needing to be filled in this initial effort are later determined not to be needed or are not needed on the schedule developed by EPA and the Respondents, the Respondents shall request approval from EPA to remove them from the master list or to modify the deliverables schedule.

At the start of each stage of the FS (i.e., for each technical memorandum to be prepared for the FS), EPA and the Respondents shall discuss whether there are data gaps on the master list that that need to be addressed before completing that stage of the FS. If EPA determines additional data gaps need to be addressed, EPA will issue a written determination confirming the data gap and the need for the data gap to be added to the master list of data gaps. As part of this process, EPA will confer with the Respondents regarding the scope of and the schedule for filling the data gaps. The deliverables schedule for that stage of the FS, as shown in Section 10 of this SOW, will be triggered from EPA's determination that the data gaps have been filled and final data have been received by the Respondents. Final data are data that have been validated and verified in accordance with EPA guidance set forth in the 2007 AOC and its appendices.

Whenever EPA determines a data gap exists and filling the data gap is necessary to progress and eventually complete the RI/FS (including work that is needed for the Dam and Slope Stability Engineering work if such work is also necessary for the RI/FS), the Respondents shall submit a draft SAP within 60 days of EPA issuing the written determination or in accordance with an approved schedule (see Section 5.1 for development of SAPs). If multiple data gaps are identified as needing to be filled, thereby requiring multiple SAPs to be developed, the SAPs will be prioritized and conducted in accordance with an approved schedule.

EPA will perform all data validation and verification and will conduct both the baseline human health risk assessment and the ecological risk assessment components of the RI. EPA will provide copies of the draft baseline human health and ecological risk assessment reports to the Respondents. The Respondents shall provide written comments on these draft documents to EPA

within 30 days of document receipt. EPA will consider the Respondents' comments when finalizing the document but is not obligated to provide written responses.

The planning documents, data summary reports, engineering reports, and design documents prepared by the Respondents for completing the Dam and Slope Stability Engineering work must be submitted for review and approval by the State, with copies to EPA and the USFS. EPA will review documents and associated designs and construction/remedial work for the Dam and Slope Stability Engineering work to ensure they are consistent with CERCLA, the NCP, and the overall protectiveness of the proposed site remedies under the RI/FS. However, the State will approve the documents prepared as part of the Dam and Slope Stability Engineering work.

5.1 **Development and Implementation of Sampling and Analysis Plans**

The Respondents shall develop a SAP for each phase of the RI and for any data collection needed to complete the FS. It is anticipated that there will be multiple phases of the RI. The number of phases required will be determined by EPA. Each SAP must include a description of the goals for the specific phase, a list of key personnel and responsibilities, Data Quality Objectives (DQOs), a Field Sampling Plan (FSP), a Quality Assurance Project Plan (QAPP), a data management plan, and a schedule.

Each FSP must describe the sampling program, including the rationale for collecting, number, type, and location of samples; the sample collection, handling and custody procedures; the required field documentation; and the required analytical methods.

Each QAPP must describe the measures necessary to generate data of sufficient quality to achieve the DQOs. The QAPP must contain details of any special training requirements and certifications, quality control requirements for field activities and analytical processes, and data validation requirements.

If the data to be collected is for the RI/FS or for the Dam and Slope Stability Engineering work (where such data are also necessary for the FS), the Respondents shall prepare draft DQOs and submit for review by EPA and the State, with a copy to USFS. EPA will provide comments on the DQOs and the Respondents shall incorporate the comments into the draft SAP. The draft SAP must then be submitted for review by EPA and the State, with a copy to the USFS. EPA will provide written comments on the draft SAP and the Respondents shall incorporate or respond to those comments and submit the final SAP within 45 days of receipt of comments or 2 weeks before field work is scheduled to be conducted based on the draft SAP schedule, whichever is later. A SAP will not be implemented until approved by EPA. Each SAP must include a schedule for, at a minimum, the start and end of field work. Respondents shall start the field work according to the EPA-approved schedule.

The Respondents shall notify EPA, the State, and USFS at least two weeks in advance of field work starting for each phase of the RI and data collection for the FS. The Respondents shall provide periodic field progress reports and participate in meetings at EPA's request. The

frequency and format of the periodic field progress reports must be specified in the SAP for such work. The Respondents shall notify EPA, the State, and USFS in writing upon completion of field activities for each phase of the RI and sampling events conducted during the FS.

In addition to collecting data for the RI/FS and the Dam and Slope Stability Engineering work, the Respondents will be conducting routine inspections and mine maintenance activities at the mine site. If the work consists of routine inspections or mine maintenance activities, no SAP or work plan is needed. Instead, the Respondents shall notify EPA and the State of the planned work. This work includes the following activities:

1. Monthly inspection of the dam, reservoir level, piezometer readings, toe drain inspections, flow measurements, and general observations. All data is reported in a monthly status report with copies circulated to involved stake holders. During the high flow periods of the year (March through June), these inspections are conducted twice per month.

2. Operation and maintenance of a telemetry system whereby data from the dam site area is transmitted to the dam safety engineer (currently, Hafferman Engineering, Inc. facilities in Kalispell) on a real-time basis.

3. Preparation and submission of the State-issued mine operational permit on a five-year basis with updates as required.

4. Preparation and distribution of the Emergency Action Plan for the Kootenai Development Impoundment Dam (KDID). Conducting of Desk Top safety training sessions, as referenced in the Emergency Action Plan, with EPA and the appropriate Lincoln County Emergency personnel, including the County Sheriff.

5. Routine inspection of the coarse tailings pile after every major rain or snow event.

6. Maintenance and calibration of stream flow measuring instruments.

7. Routine inspections of toe drains using video cameras and removal of debris such as any roots growing in the drains, as needed.

8. Routine annual inspection of the Upper Rainy Creek diversion dam.

9. Routine annual inspection and operation and maintenance of the mine site weather station.

If the work consists of activities other than routine inspections or mine maintenance activities, the Respondents shall submit a work plan for the activities to EPA and the State for review. For example, a work plan is required for routine maintenance for erosion rills observed in the coarse tailings pile. To the extent that the work would occur on areas of the mine subject to State permits or for the Dam and Slope Stability Engineering work, such work is subject to State

approval. EPA will review the work plan to ensure the activities are consistent with CERCLA, the NCP, and the overall protectiveness of proposed site remedies under the RI/FS.

For any work conducted in OU3, Respondents shall prepare a Health and Safety Plan (HASP) and submit it to EPA and the State. Respondents must also submit a copy of a HASP to the USFS for any work conducted on USFS-managed lands. EPA, the State, and USFS will not approve the HASP. The Respondents are solely responsible for ensuring the health and safety of their employees or contractors performing any of the work described in this revised SOW.

The Respondents shall obtain access to properties for sampling. In addition, the Respondents shall notify by email the following USFS representative in advance of conducting any sampling on USFS-managed lands:

Robert Wintergerst, Environmental Engineer
Northern Regional Office, Engineering
USDA Forest Service
rwintergerst@fs.fed.us

The Respondents shall implement each final EPA-approved SAP in accordance with the schedule described in the SAP. In the event that the EPA-approved SAP schedule must be changed due to inclement weather or other unpredictable site hazards (e.g., high fire risk), the EPA will be notified immediately and a modified schedule will be presented for EPA approval. The Respondents shall arrange for analytical data from laboratories to be reported directly to EPA in the format specified by EPA in the SAP. EPA will perform all required data validation and verification described in the SAP.

The Respondents shall record and maintain field logs and laboratory reports information gathered during site characterization. The method(s) of documentation must be consistent with that specified in the SAP. The Respondents shall use field logs to document observations, measurements, and significant events that occur during field activities. The Respondents shall ensure that laboratory reports document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies.

The Respondents shall maintain field reports and sample shipment records. Analytical results developed under the SAPs must not be included in any site characterization summary reports or RI reports unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the Respondents shall establish a data security system to safeguard field logs, field data sheets, laboratory reports, chain of custody forms and other project records to prevent loss, damage, or alteration of project documentation. The Respondents shall submit a written description of the data security system to EPA and the State for review and EPA approval in accordance with Section X of the 2007 Administrative Order.

5.2 **Annual Field Sampling Summary Reports**

Respondents shall prepare a summary report describing the implementation of the SAP(s) or work plan(s), whichever is appropriate, on an annual basis. Each summary report must include the field documentation specified in the SAP(s) or work plan(s), a description of the physical characteristics of the study area, results of all required field quality control procedures, and results of all field and laboratory audits performed by the Respondents as specified in the SAP or work plan. The Respondents shall submit a summary report by the end of the first quarter for sampling conducted during the prior year for EPA review and approval, with copies to the State and the USFS.

5.3 RI Report

After the SAP for the final phase of the RI has been implemented, the Respondents shall prepare and submit a draft RI report to EPA, with copies to the State and the USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in Section 10 of this revised SOW. The RI report must summarize results of field activities to characterize OU3, the sources of contamination, the nature and extent of contamination, and the fate and transport of contaminants. The Respondents shall refer to Table 3-13 in "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," OSWER Directive No. 9355.3-01 (October 1988) for a recommended RI report format with the exception that EPA will prepare the baseline human health risk assessment and the baseline ecological risk assessment.

The RI report must analyze and evaluate the data to describe the following:

- Physical and biological characteristics of OU3;
- Contaminant source characteristics;
- Nature and extent of contamination; and
- Contaminant fate and transport.

The RI report must include the actual and potential magnitude of releases from the sources, the horizontal and vertical spread of contamination, and the mobility and persistence of contaminants. Where modeling is appropriate, such models must be identified in a letter submitted for EPA review and approval, with copies to the State and the USFS, prior to their use. Upon request, the Respondents shall make available all data and programming, including any proprietary programs. Also, this evaluation must provide any information relevant to OU3 characteristics necessary for the development and evaluation of remedial alternatives.

EPA performed a slash pile burn ABS sampling event and the Respondents performed understory burn and trespasser ABS sampling events to support the baseline human health risk assessment, the RI, and the FS. The reporting of the results of these ABS scenarios must be included in a revised draft RI report. Respondents will respond to the consolidated comments of

EPA, the State and USFS on the draft RI report and provide a revised draft RI report by January 22, 2016. Respondents' response to comments may be provided in table or Excel format. The Respondents shall submit a final RI report for EPA review and approval, with copies to the State and USFS, based on the schedule set forth in Section 10 of this SOW.

If new final data become available that support the RI, HHRA or the FS, Respondents shall submit an RI report addendum (or multiple RI report addenda, as appropriate) for EPA review and comment, with copies to the State and USFS, within 60 days after being notified that such final data are available. The Respondents shall incorporate EPA comments, and finalize the addenda upon EPA approval in accordance with the schedule set forth in Section 10 of this SOW.

6.0 FEASIBILITY STUDY

The FS for OU3 must be developed in two phases. Phase 1 addresses areas of OU3 adjacent to the mine site (e.g., forested areas not disturbed by mining activities and roads not used for mining access) that are not subject to Phase 2. Phase 2 must address the mine site, areas disturbed by mining activities (including the rock disposal area, tailings piles, the amphitheater, rock quarries, mining access roads such as Rainy Creek Road, and previously reclaimed areas), and water bodies (e.g., the impoundments dam, Rainy Creek, Carney Creek, Fleetwood Creek, and the Kootenai River). This phased approach will allow work on Phase 2 areas (e.g., Dam and Slope Stability Engineering work conducted under the mine permits and state authorities) to proceed on a separate schedule than the FS for Phase 1 areas to the extent practicable. Both phases of the FS must be developed based on the FS remedial action objectives (RAOs) and ARARs provided by EPA under Section 6.1 of this revised SOW. Each phase of the FS must also be developed in accordance with Section 6.2 and Sections 7–9 of the revised SOW below.

Phase 1 of the FS must be started upon EPA's issuance of the FS RAOs and ARARs. The Phase 2 FS must be started in accordance with the deliverables schedule in Section 10 of this SOW, which is based on coordinating FS preparation with the development of the Appraisal Study being conducted under the Dam and Slope Stability Engineering work and related work.

Respondents shall perform the RI and FS activities in parallel rather than sequentially. FS Phases 1 and 2 will be performed in parallel to the extent practicable.

6.1 Remedial Action Objectives

EPA, in consultation with the State and USFS, will develop FS RAOs and a refined list of potential State and federal ARARs based on the sampling data collected for the RI report and the baseline human health risk assessment and ecological risk assessment prepared by EPA. The Respondents shall use the FS RAOs in the development of the FS. EPA will finalize the FS RAOs as remedial action objectives in the Record of Decision.

The FS RAOs will be based on media. The media definitions will be prepared by EPA and incorporated by the Respondents in the FS.

6.2 **Development and Screening of Remedial Alternatives**

The Respondents shall perform the following activities to complete the development and screening of remedial alternatives.

6.2.1 Develop General Response Actions

The Respondents shall develop general response actions in accordance with the FS RAOs. General response actions may include treatment, containment, excavation, extraction, disposal, institutional controls, or a combination of these. EPA will provide the Respondents with an FS Parameters Memorandum providing EPA's expectations for the FS. The Respondents shall incorporate into the FS the parameters set forth in the Parameters Memorandum.

For each environmental medium for which FS RAOs have been developed, the Respondents shall make an initial determination of areas or volumes to which general response actions may apply, taking into account OU3 conditions, the nature and extent of contamination, and acceptable exposure levels and potential exposure routes identified in the FS RAOs.

6.2.2 Identify and Screen Remedial Technology Types and Process Options

The Respondents shall identify and evaluate remedial technology types and process options applicable to each general response action. The term "technology types" refers to general categories of technologies. The term "process options" refers to specific processes within each technology type. Several broad technology types may be identified for each general response action and numerous technology process options may exist within each technology type.

The Respondents shall use information from the RI on contaminant types and concentrations and OU3 characteristics to screen out technologies and process options that cannot be effectively implemented at OU3. The Respondents shall document the results of the initial screening of technology types and process options. The Respondents shall refer to Figures 4-4 and 4-5 in the "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," OSWER Directive No. 9355.3-01 (October 1988) for examples of figures that may be used to summarize the initial screening of technologies and process options and the evaluation of process options.

The Respondents shall then prepare the Identification and Screening of Technologies Technical Memorandum. This memorandum must include the following:

- A description of the general response actions and the contaminated media to which they apply;
- A description of the remedial technology types and process options applicable to each general response action; and

- The results of the initial screening of remedial technology types and process options.

The Respondents shall submit the Identification and Screening of Technologies Technical Memorandum for EPA review and approval, with copies to the State and USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in Section 10 of this revised SOW.

6.2.3 Risk Management Strategy

The Respondents shall prepare a Draft Risk Management Strategy (RMS) for EPA review and approval, with copies to the State and the USFS. The focus of the RMS will be to provide adequate protection of human health from exposure by ingestion and inhalation to Libby Amphibole Asbestos (LAA) and rank LAA sources utilizing risk to evaluate and prioritize the protectiveness of remedial alternatives. This document will propose response action levels (RALs), remedial clearance criteria (RCCs), or other performance criteria for EPA review and approval. Due to the iterative nature of the RMS as a tool to evaluate and prioritize the protectiveness of remedial alternatives, the RMS will be incorporated into the body of the FS.

Upon receipt of EPA comments on the draft RMS, the Respondents will use the RALs, RCCs, or other approved performance criteria in the Draft Development and Screening of Alternatives Memorandum and subsequent technical memoranda. The Respondents shall incorporate EPA comments and submit a revised draft RMS. As the FS progresses, the RMS is expected to mature in both scope and rigor. As changes are made to the strategy during the development of the FS, the updated RMS will be included as an attachment to the next scheduled technical memorandum for review and acceptance by EPA. To reflect the structure of the FS and to ensure the RMS remains highly focused and relevant as work progresses, a separate RMS will be developed for each phase of the FS. The final RMS for each phase will be incorporated into the final FS for that phase.

6.2.4 Assemble and Document Alternatives

Upon receipt of EPA comments on the draft RMS, the Respondents shall assemble selected representative technologies into alternatives that represent a range of treatment and containment combinations that will address the remedial action objectives for OU3. The Respondents shall specify the reasons for eliminating alternatives during the preliminary screening process.

6.2.5 Alternative Screening and Selection of Alternatives for Detailed Analysis

The Respondents shall screen each remedial alternative based on effectiveness, implementability, and cost. As appropriate, the screening will preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives must include options that use treatment technologies and permanent solutions to the maximum extent practicable.

6.2.6 Development and Screening of Alternatives Technical Memorandum

The Respondents shall prepare a Development and Screening of Alternatives Technical Memorandum summarizing the work performed in the screening of alternatives and the results of each subtask described in this section including:

- A description of the remedial alternatives;
- The results of the screening of alternatives based on effectiveness, implementability, and cost;
- A description of the alternatives that remain after screening; and
- A description of the action-specific State and federal ARARs for each alternative.

The Respondents shall submit the Development and Screening of Alternatives Technical Memorandum to EPA for review and approval, with copies to the State and the USFS, in accordance with Section X of the 2007 Administrative Order and in accordance with the schedule contained in Section 10 of this revised SOW.

7.0 TREATABILITY STUDIES

EPA may require the Respondents to perform treatability studies to provide sufficient data to allow treatment alternatives to be fully developed and evaluated during the feasibility study and/or to reduce the cost and performance uncertainties for treatment alternatives to levels sufficient to allow EPA to select a remedy.

7.1 **Letter Report**

The Respondents shall provide recommendations as to whether treatability studies are needed. If EPA determines that treatability studies are needed, the Respondents shall identify a range of candidate technologies for treatability studies based on the FS RAOs and the list of potential State and federal ARARs and taking into consideration the final results of the development and screening of alternatives. The Respondents shall describe the candidate technologies in a letter report submitted for EPA review and approval, with copies to the State and the USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in Section 10 of this revised SOW.

The letter report must present information on relative performance, costs, effectiveness, operation and maintenance requirements, and implementability of the identified candidate technologies. If the existing data on OU3 and the available information on candidate technologies are not sufficient to evaluate alternatives in the detailed analysis of alternatives, EPA may require treatability studies to be performed by the Respondents.

If EPA determines that treatability studies are not needed, EPA will notify the Respondents in writing not to perform the Work described in Sections 7.2 and 7.3 of this SOW, and proceed directly to Section 8 below.

7.2 **Treatability Study Work Plan**

Where EPA has determined that treatability studies are required, and unless the Respondents can demonstrate to EPA's satisfaction that they are not needed, the Respondents shall submit a draft treatability study work plan for EPA review and approval, with copies to the State and the USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in Section of 10 of this revised SOW. The work plan must describe the type of treatability study to be performed (e.g., bench scale or pilot scale) and include:

- A discussion of background information on OU3;
- A list of key personnel and responsibilities;
- A description of the remedial technologies to be tested;
- DQOs for each test including measurements of performance;
- The experimental procedures for each test;
- A SAP which describes the samples to be collected, sample collection procedures, sampling handling and tracking procedures, a QAPP, and analytical methods;
- A data management plan;
- A health and safety plan;
- A plan for management of waste generated during the treatability tests; and
- A schedule for the start and end of the treatability study.

7.3 **Treatability Studies Report**

Upon EPA approval of the treatability study work plan, the Respondents shall implement the work plan. The Respondents shall implement the work plan in accordance with the schedule in this EPA-approved treatability study work plan. Following completion of the treatability study, the Respondents shall analyze and interpret the study results in a technical report submitted for EPA review and approval, with copies to the State and USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in the final EPA-approved treatability study work plan. In the report the Respondents shall evaluate the effectiveness, implementability, and cost of each technology and compare test results with predicted results. The Respondents shall also evaluate full-scale application of the technology including a sensitivity analysis identifying key parameters affecting full-scale operation.

8.0 DETAILED ANALYSIS OF ALTERNATIVES

Upon receipt of EPA comments on the Treatability Studies Report, if a treatability study is needed, or upon written notice from EPA that a treatability study is not needed, the Respondents shall perform a detailed analysis of the remaining remedial alternatives. The detailed analysis must be sufficient to allow EPA to adequately compare the alternatives, select a remedial action for OU3, and demonstrate satisfaction of the CERCLA statutory remedy selection requirements (CERCLA § 121(b)(1)(A)).

The Respondents shall assess each alternative against the following seven of the nine evaluation criteria contained in the National Contingency Plan (40 CFR § 300.430(e) (9)(iii)):

1. Overall protection of human health and the environment;
2. Compliance with ARARs;
3. Long term effectiveness and permanence;
4. Reduction of toxicity, mobility, or volume through treatment;
5. Short-term effectiveness;
6. Implementability; and
7. Cost.

The Respondents shall conduct the detailed analysis of alternatives by evaluating each alternative against the seven evaluation criteria above. The Respondents shall then prepare a Detailed Analysis of Alternatives Technical Memorandum to provide EPA with the results of the analysis. This memorandum must include a description of the detailed analysis of each alternative against the seven criteria listed above, as well as tables summarizing the results. The tables must include a system that categorizes compliance with each criterion that will allow comparison between the alternatives in the next step of the FS.

The Respondents shall submit the Detailed Analysis of Alternatives Technical Memorandum for EPA review and approval, with copies to the State and USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in Section 10 of this revised SOW.

Following EPA approval of the Detailed Analysis of Alternatives Technical Memorandum, the Respondents shall perform a comparative analysis between remedial alternatives. That is, each alternative must be compared against the others using the evaluation criteria as a basis of comparison. The Respondents shall then prepare a Comparative Analysis of Alternatives Technical Memorandum to provide EPA with the results of the analysis. This memorandum must include a description of the comparative analysis of each alternative against the other alternatives based on the detailed analysis described above, as well as tables summarizing the

results. The tables must include a system that categorizes the comparison of each alternative with the other alternatives.

The Respondents shall submit the Comparative Analysis of Alternatives Technical Memorandum for EPA review and approval, with copies to the State and USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in Section 10 of this revised SOW.

9.0 FEASIBILITY STUDY REPORT

The Respondents shall prepare a separate draft FS report for each phase of the FS that summarizes the development and screening of remedial alternatives and the detailed and comparative analysis of alternatives. The Respondents shall refer to the "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," OSWER Directive No. 9355.3-01 (October 1988) for an outline of the FS reports and the required report content. The Respondents shall submit the draft FS reports for EPA review and approval, with copies to the State and USFS, in accordance with Section X of the 2007 Administrative Order and the schedule contained in Section 10 of this revised SOW.

10.0 SCHEDULE OF DELIVERABLES

In general, the activities for completion of the RI and the development of the FS must be performed in parallel rather than sequentially. This will minimize the time it will take to complete the RI/FS and EPA's selection of a remedy in the ROD.

The Respondents shall deliver documents and perform activities described in this revised SOW in accordance with the following schedule. Comments from the reviewing agencies on draft documents will be submitted to Respondents in a mutually agreed upon format (e.g., Excel) to facilitate Respondents' expedient responses.

DELIVERABLES SCHEDULE		
SOW Reference	**Document or Activity**	**Delivery Date**
Section 3.1	Provide existing information	30 days after signing AOC and thereafter, 2 weeks after becoming aware of new information
Section 3.2	Notification of field visit	2 weeks prior to field visit
Section 3.2	Conduct field visit	Not later than 45 days after signing AOC
Section 4	Community relations support	As requested by EPA
Section 5.1	Draft SAP for data collection	Within 60 days after EPA issues a written determination that a data gap(s) must be filled; SAPs will be prioritized in the order which the field work will be conducted
Section 5.1	Final SAP for data collection	45 days after receiving EPA and the State

DELIVERABLES SCHEDULE		
SOW Reference	**Document or Activity**	**Delivery Date**
		comments on the draft SAP or no later than 2 weeks before the anticipated start date set forth in the draft SAP
Section 5.1	Implement field work to fill EPA-determined data gap	Follow schedule for field work as specified in EPA-approved SAP
Section 5.1	Health and Safety Plan	2 weeks prior to field visit
Section 5.1	Health and Safety Plan updates necessary for SAP implementation	30 days prior to start of field work
Section 5.1	Written description of data security system	30 days prior to start of field work
Section 5.2	Field Sampling Summary Reports	By the March of the year following the sampling conducted during the prior year
Section 5.3	Draft RI Report	90 days after receiving EPA letter notifying Respondents that field work is complete for final phase of sampling
Section 5.3	Final RI Report	45 days after receiving EPA, the State, and USFS comments on the revised draft RI Report
Section 5.3	Draft RI Report Addendum	60 days after receipt of final data
Section 5.3	Final RI Report Addendum	45 days after receipt of EPA comments on the draft addendum
Phase 1 FS (Forested Areas)		
Section 6.2.3	Draft Identification and Screening of Technologies Technical Memorandum	45 days after revised Statement of Work is in effect
Section 6.2.3	Final Identification and Screening of Technologies Technical Memorandum	60 days after receiving EPA comments on draft Technical Memorandum
Section 6.2.5	Draft Risk Management Strategy	90 days after receipt of the final HHRA
Section 6.2.5	Revised Draft Risk Management Strategy	45 days after receipt of EPA comments on draft RMS
Section 6.2.5	Final Risk Management Strategy	Submitted with the Final Feasibility Study
Section 6.2.6	Draft Development and Screening of Alternatives Technical Memorandum	60 days after receipt of EPA comments on the Identification and Screening of Technologies Technical Memorandum or 60 days after receipt of EPA comments on the Draft Risk Management Strategy, whichever is later
Section 6.2.6	Final Development and Screening of Alternatives Technical Memorandum	60 days after receipt of EPA comments on draft Technical Memorandum
Section 7.1	Draft Treatability Studies Letter Report	45 days after receipt of EPA comments on the draft Development and Screening of Alternatives Technical Memorandum
Section 7.1	Final Treatability Studies Letter Report	45 days after receipt of EPA comments on draft Treatability Studies Letter Report
Section 7.2	Draft Treatability Studies Work Plan	45 days after receiving notice from EPA that treatability studies are required
Section 7.2	Final Treatability Studies Work Plan	45 days after receipt of EPA comments on draft Work Plan
Section 7.3	Draft Treatability Studies Technical Report	As specified in EPA-approved final Treatability Studies Work Plan

DELIVERABLES SCHEDULE		
SOW Reference	**Document or Activity**	**Delivery Date**
Section 7.3	Final Treatability Studies Technical Report	45 days after receipt of EPA comments on draft Technical Report
Section 8	Draft Detailed Analysis of Alternatives Technical Memorandum	75 days after receipt of EPA comments on the draft Treatability Studies Technical Report (if EPA has determined a treatability study is necessary) or 75 days after receiving notification by EPA that treatability studies are not needed.
Section 8	Final Detailed Analysis of Alternatives Technical Memorandum	45 days after receipt of EPA comments on draft Technical Memorandum
Section 8	Draft Comparative Analysis of Alternatives Technical Memorandum	45 days after receipt of EPA comments on the draft Detailed Analysis of Alternatives Technical Memorandum
Section 8	Final Comparative Analysis of Alternatives Technical Memorandum	45 days after receipt of EPA comments on draft Technical Memorandum
Section 9	Draft FS Report	45 days after submittal of final Comparative Analysis of Alternatives Technical Memorandum
Section 9	Final FS Report	45 days after receipt of EPA comments on draft FS report
Phase 2 FS (including Mine Site, Lower Rainy Creek, and Kootenai River)		
Section 6.2.3	Draft Identification and Screening of Technologies Technical Memorandum	60 days after finalization of the KDID Appraisal Study or September 28, 2016, whichever is earlier
Section 6.2.3	Final Identification and Screening of Technologies Technical Memorandum	45 days after receipt of EPA comments on draft Technical Memorandum
Section 6.2.5	Draft Risk Management Strategy	90 days after submission of the KDID Appraisal Study or 60 days after September 28, 2016, whichever is earlier
Section 6.2.5	Revised Draft Risk Management Strategy	45 days after receipt of EPA comments on draft RMS
Section 6.2.5	Final Risk Management Strategy	Incorporated into the Final Feasibility Study
Section 6.2.6	Draft Development and Screening of Alternatives Technical Memorandum	60 days after receipt of EPA comments on the Draft Identification and Screening of Technologies Technical Memorandum or receipt of EPA comments on the Draft Risk Management Strategy, whichever is later
Section 6.2.6	Final Development and Screening of Alternatives Technical Memorandum	60 days after receipt of EPA comments on draft Technical Memorandum
Section 7.1	Draft Treatability Studies Letter Report	45 days after EPA approval of responses to comments on the draft Development and Screening of Alternatives Technical Memorandum
Section 7.1	Final Treatability Studies Letter Report	45 days after receipt of EPA comments on the draft Treatability Studies Letter Report.
Section 7.2	Draft Treatability Studies Work Plan	45 days after receiving notice from EPA that treatability studies are required

DELIVERABLES SCHEDULE		
SOW Reference	**Document or Activity**	**Delivery Date**
Section 7.2	Final Treatability Studies Work Plan	45 days after receipt of EPA comments on draft Work Plan
Section 7.3	Draft Treatability Studies Technical Report	As specified in EPA-approved final Treatability Studies Work Plan
Section 7.3	Final Treatability Studies Technical Report	45 days after receipt of EPA comments on draft Technical Report
Section 8	Draft Detailed Analysis of Alternatives Technical Memorandum	75 days after receipt of EPA comments on the draft Treatability Studies Technical Report (if EPA has determined a treatability study is necessary) or 75 days after receiving notification by EPA that treatability studies are not needed
Section 8	Final Detailed Analysis of Alternatives Technical Memorandum	45 days after receipt of EPA comments on draft Technical Memorandum
Section 8	Draft Comparative Analysis of Alternatives Technical Memorandum	45 days after submission of the final Detailed Analysis of Alternatives Technical Memorandum
Section 8	Final Comparative Analysis of Alternatives Technical Memorandum	45 days after receipt of EPA comments on draft Technical Memorandum
Section 9	Draft FS Report	45 days after submittal of the final Comparative Analysis of Alternatives Technical Memorandum
Section 9	Final FS Report	45 days after receipt of EPA comments on the draft FS Report

ATTACHMENT A

List of Guidance Documents

Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA. OSWER Directive 9355.3-01

Clarifying Cleanup Goals and Identification of New Assessment Tools for Evaluating Asbestos at Superfund Cleanups. OSWER No. 9345.4-05

A Guide to Developing and Documenting Cost Estimates during the Feasibility Study. EPA 540-R-DO-002, OSWER No. 9355.0-75

CERCLA Compliance with Other Laws Manual. Part I. Interim Final
EPA 540/G - 89/006, OSWER No. 9234.1-01

CERCLA Compliance with Other Laws Manual: CERCLA Compliance with the CWA and SDWA. OSWER No. 9234.2-06/FS